

WHAT IS CLAIMED IS:

1. A printhead substrate having a plurality of ink supply channels disposed at predetermined intervals,
5 comprising:
 - a printing element array having a plurality of printing elements disposed in an area between at least two of the ink supply channels, alongside each of the ink supply channels;
- 10 a drive control circuit, disposed outside the area, for controlling the driving of the printing element array; and
 - a shared wiring portion, disposed in the area, for transferring a signal from the drive control
- 15 circuit to each of the printing elements of the printing element array, and concurrently and drivably selecting a predetermined one of the printing elements of the printing element array.
- 20 2. The printhead substrate according to claim 1, wherein a first printing element array and a second printing element array are disposed along both sides of each of the ink supply channels.
- 25 3. The printhead substrate according to claim 1, further comprising a time-divisional drive control circuit that time-divisionally drives the printing

elements included in the printing element array via the drive control circuit,

wherein the shared wiring portion is a plurality of wires that transmit a control signal for specifying
5 a sequence upon the time divisional driving.

4. The printhead substrate according to claim 3,
further comprising a decoder circuit that generates a
control signal for specifying a sequence upon the time
10 divisional driving.

5. The printhead substrate according to claim 4,
wherein the time-divisional drive control circuit and
the decoder circuit are provided on a peripheral
15 portion of the printhead substrate.

6. The printhead substrate according to claim 3,
wherein the shared wiring portion, the time-divisional
drive control circuit and the decoder circuit are
20 disposed approximately symmetrically about a center of
the printhead substrate.

7. The printhead substrate according to claim 3,
further comprising:
25 a shift register circuit that inputs a print
signal for driving the printing elements; and
a latch circuit that latches the print signal

input to the shift register circuit.

8. The printhead substrate according to claim 7,
wherein the shift register circuit and the latch
5 circuit are provided on a peripheral portion of the
printhead substrate.

9. The printhead substrate according to claim 7,
wherein the shared wiring portion, the time-divisional
10 drive control circuit, the shift register circuit and
the latch circuit are disposed approximately
symmetrically about a center of the printhead substrate.

10. The printhead substrate according to claim 1,
15 wherein the shared wiring portion is a matrix wiring
capable of time-divisionally controlling sending an
electric current so as to time-divisionally drive the
printing elements.

20 11. The printhead substrate according to claim 1,
wherein ink of different colors is supplied to each of
the ink supply channels.

12. A printhead having a plurality of ink supply
25 channels disposed at predetermined intervals,
comprising:

a printing element array having a plurality of

printing elements disposed in an area between at least two of the ink supply channels, alongside each of the ink supply channels;

5 a drive control circuit, disposed outside the area, for controlling the driving of the printing element array; and

10 a shared wiring portion, disposed in the area, for transferring a signal from the drive control circuit to each of the printing elements of the printing element array, and concurrently and drivably selecting a predetermined one of the printing elements of the printing element array.

13. The printhead according to claim 12, wherein a
15 first printing element array and a second printing element array are disposed along both sides of each of the ink supply channels.

14. The printhead according to claim 12, further
20 comprising a time-divisional drive control circuit that time-divisionally drives the printing elements included in the printing element array via the drive control circuit,

25 wherein the shared wiring portion is a plurality of wires that transmit a control signal for specifying a sequence upon the time divisional driving.

15. The printhead according to claim 14, further comprising a decoder circuit that generates a control signal for specifying a sequence upon the time divisional driving.

5

16. The printhead according to claim 15, wherein the time-divisional drive control circuit and the decoder circuit are provided on a peripheral portion of a printhead substrate.

10

17. The printhead according to claim 14, wherein the shared wiring portion, the time-divisional drive control circuit and the decoder circuit are disposed approximately symmetrically about a center of a
15 printhead substrate.

18. The printhead according to claim 14, further comprising:

a shift register circuit that inputs a print
20 signal for driving the printing elements; and
a latch circuit that latches the print signal
input to the shift register circuit.

19. The printhead according to claim 18, wherein the
25 shift register circuit and the latch circuit are
provided on a peripheral portion of a printhead
substrate.

20. The printhead according to claim 18, wherein the shared wiring portion, the time-divisional drive control circuit, the shift register circuit and the 5 latch circuit are disposed approximately symmetrically about a center of a printhead substrate.

21. The printhead according to claim 12, wherein the shared wiring portion is a matrix wiring capable of 10 time-divisionally controlling sending an electric current so as to time-divisionally drive the printing elements.

22. The printhead according to claim 12, wherein ink 15 of different colors is supplied to each of the ink supply channels.

23. The printhead according to claim 12, further comprising an ink tank integrated into the printhead 20 for supplying ink to each of the ink supply channels.

24. A printing apparatus for printing by discharging ink onto a printing medium using a printhead according to claim 23.

25

25. The apparatus according to claim 24, wherein the printhead is exchangeable.

26. A printing apparatus for printing by discharging ink onto a printing medium using a printhead according to claim 12.